PureLink
Digital Extender®

OBC II Owner's Manual

Modular Fiber Optic DVI Extender w. Digital/Stereo Audio

Dtrovision LLC
9A Bergen Turnpike
Little Ferry, NJ 07643
Tel: 201.488.3232
Fax: 201.621.6118

E-mail: mpark@dtrovision.com
www.purelinkav.com

For technical support,
contact: support@dtrovision.com

Package Contents

Please make sure all of the following items are included in the package:

1) OBC II Transmitter Module
2) OBC II Receiver Module
3) 6ft HDMI Cable (x2)
4) DC 12V Power Supply Unit with a power cord

General Specification

OBC II is a DVI, digital surround audio and analog stereo audio extension system over pure fiber optic cable for long distance up to 5,000ft.

Compact & durable design and low power consumption makes it an ideal solution for connection for high definition video/audio signal of digital displays such as LCD/Plasma displays and projectors.

OBC II's unique circuitry and optic conversion design eliminates the need of a copper connection (Cat 5) between the transmitter and receiver. This pure fiber optic connection enables electrical noise free and EMI free that is ideal for long distance extension of high definition DVI signal, digital multi-surround signal or stereo analog signals.

OBC II's intuitive LCD panel on both transmitter and receiver show the status of the video and audio signals including the current signal image format and audio format. This information provides helpful diagnostic information.

Model	OBC II
Input Signal	Digital RGB(DVI), Digital Audio(COXIAL), Analog Stereo Audio
Output Signal	Digital RGB(DVI), Digital Audio(COXIAL), Analog Stereo Audio
Supporting Display Resolutions	VGA ~WUXGA(up to 1920 x 1200 @ 60Hz) , 480i ~ 1080p
Max. Distance	1920x1200 @ 60Hz or at 1080p: 1,000M(3,300ft) 1280x1024 @ 60Hz or at 1080i: 1,530M(5,000ft)
Connector Type	DC Power Jack DVI 29 Pin Female LC Receptacles with 4 cores RCA Audio Jack Optical Audio Jack
Conformations	DDWG DVI1.0 With HDCP
Power Rating	DC +12V , 10W Max
Dimension	5.36x4.65x0.986(inches) 136x118x25(mm)
Weight	Transmitter: 1.1Lbs(0.48Kg) / Receiver: 1.1Lbs(0.48Kg)

Operation and Reliability Specification

1. Operating Environment
   Temperature : 50F ~ 104F (10℃~ 40℃)
   Humidity : 10% ~ 80%
   Altitude : 3,000m Max.

2. Transit Environment
   Temperature : -13F ~ 140F (-25℃~ 60℃)
   Humidity : 5% ~ 95%
   Altitude : 15,000m Max.

3. Storage Environment
   Temperature : -4F ~ -49F (-20℃~ 45℃)
   Humidity : 5% ~ 95%
   Altitude : 3,000m Max.

4. Reliability
   MTBF: 90% at over 50,000 hours aging test
   - In compliance with LCD Monitor reliability test standard

Main Features

1. Zero loss & Zero noise delivery of digital high definition video and audio signal us ing optical conversion technology, OBC II delivers HD signals over fiber optic cabl es without loss or digital interference maintaining the clarity and colors. Noise ca ncellation and error correction logic enhances HDMI video and audio signals over long distance.

2. Built-in signal repeater to support longer distance between the source and the OBC II transmitter & OBC II receiver and the display. This Signal Repeater logic su pports up to 50ft copper based HDMI cables.

3. Compact and Robust Module Design

4. Long Distance (Up to 5000ft at 1080i or lower signal) over cost effective multimo de fiber optic cables.

5. Full EDID Management
   Saving/Emulating display's EDID in the transmitter module enhances reliability and compatibility with various displays.

6. HDCP (High-bandwidth Digital Content Protection) Support.

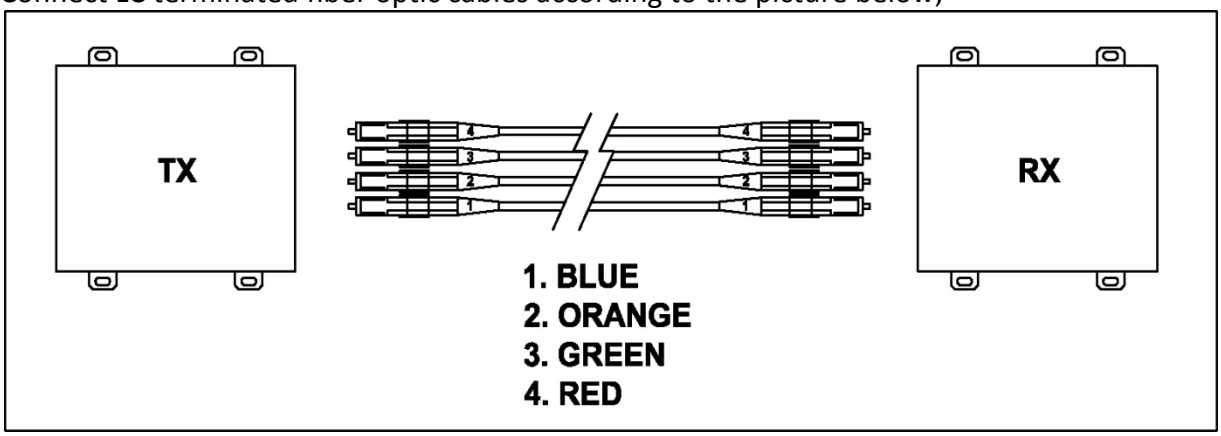
7. DDWG DVI version 1.0 Support.

8. Signal Status LCD panel on both transmitter and receiver modules video and audi o signal information is displayed on the LCD panels to help understand the signal even before the display is connected. Display Resolution, refresh rates and audio signal status are intuitively displayed on the modules.

Installation and Connection Instructions

Installation and Connection Instructions

1. Turn off both the video source and the display before connecting any cables.
2. Connect DVI cable between the source and OBC II transmitter AND between the OBC II receiver and the display.
3. Connect LC terminated fiber optic cables according to the picture below;

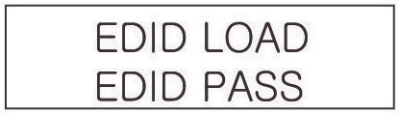


4. Connect the power supply unit to both OBC II transmitter and receiver units.
5. Turn on Display
6. Turn on Video Source

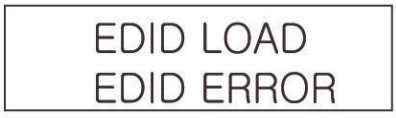
EDID Management

For reliability and correct signal transmission of the video source, EDID emulation is recommended. Please follow the steps below;

1. Connect the HDX II transmitter's HDMI input port to the Display's HDMI input port
2. Press and hold EDID switch for about 2 seconds until the Display's EDID is successfully saved on t o the transmitter. 'EDID PASS' message on the LCD panel indicates successful EDID save. 'EDID ER ROR' message indicates failed EDID save. Please repeat the step #1 and #2.
   ** Factory Default EDID is based on 1080p.



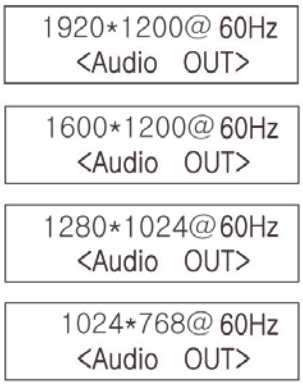
<EDID Save Successful>



<EDID Save Failed>

Signal Status LCD Display

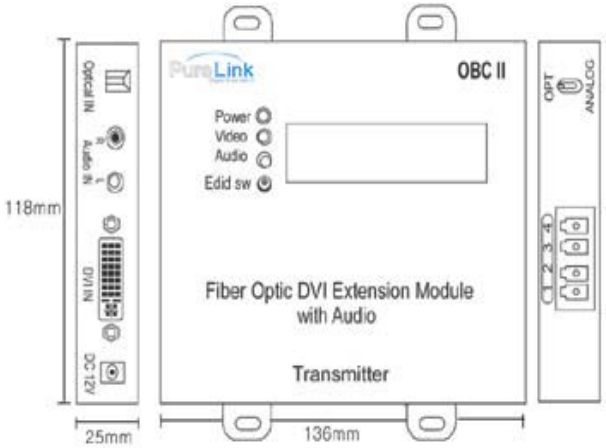
The LCD panel on OBC II transmitter and receiver shows the current signal status.
Example Status:



OBC II Transmitter and Receiver Specification

Module Dimensions: 5.36x4.65x0.986 (inches) 136x118x25(mm)

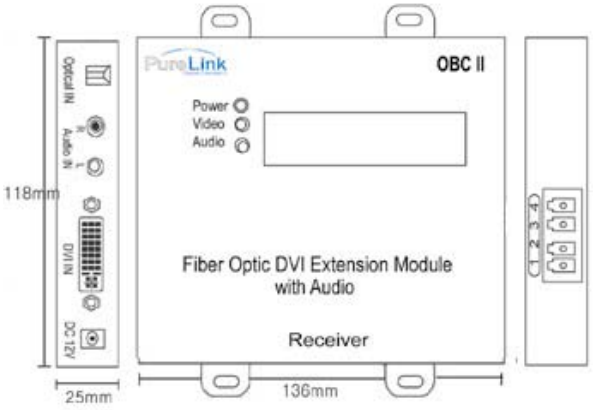
Transmitter Module



Connection Ports;

DVI IN: DVI-D Input
Audio IN(R, L): Analog Stereo Audio input
OPTICAL IN: Digital Audio input
OPT/ANALOG Switch: Toggle between Stereo Audio and Digital Audio (Optical In)
1234 optical receptacles
12V DC Power Supply Unit Input

Receiver Module



Connection Ports;

DVI OUT: DVI-D Output
Audio out (R, L): Analog Stereo Audio Output
OPTICAL Out: Digital Audio Output
OPT/ANALOG Switch: Toggle between Stereo Audio and Digital Audio (Optical Out)
1234 optical receptacles
12V DC Power Supply Unit Input

LCD Panel Display;
LCD Display: 16x2 digital LCD
Power LED: Power On/Off Indication
Video LED: DVI Video Signal Status
Audio LED: Audio Signal Status
EDID s/w: EDID Save Function button

Technical Specification

Data Transfer Speed:	Up to 2.25 Gbps (Single Link)
Frequency Range:	25 ~ 165 MHz
Supporting Display Resolutions:	Up to WUXGA (1920X1200)@60Hz / 1080p
I/O Signal Standard:	Digital RGB, TMDS
Max Distance:	1,000m (3,300ft) at 1920x1200@60Hz / 1080p 1,500m (5,000ft) at 1600x1200@60Hz / 1080i
Optical Source:	850 nm Vcsel
Optical Cable Specification:	Multimode 50/125 or, 62.5/125
Input Ports:	DVI-D Female 29P / LC Receptacles x 4 cores / RCA / Optical
Output Ports:	DVI-D Female 29P / LC Receptacles x 4 cores / RCA /
Optical Power Consumption:	Transmitter: 2.65 Watts (Max) / Receiver: 3.48 Watts (Max)
Power Rating:	12V DC / 3A

Warranty

2 (Two) Year Warranty

Dtrovision warrants this fiber optical DVI extension cable to be free from defects in workmanship and materials, under normal use and service, for a period of two (2) year from the date of purchase from Dtrovision or its authorized resellers.

If a product does not work as warranted during the applicable warranty period, Dtrovision shall, at its option and expense, repair the defective product or part, deliver to customer an equivalent product or part to replace the defective item, or refund to customer the purchase price paid for the defective product.

All products that are replaced will become the property of Dtrovision.

Replacement products may be new or reconditioned.

Any replaced or repaired product or part has a ninety (90) day warranty or the reminder of the initial warranty period, whichever is longer.

Dtrovision shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to Dtrovision for repair under warranty or not.

Warranty Limitation and Exclusion

Dtrovision shall have no further obligation under the foregoing limited warranty if the product has been damaged due to abuse, misuse, neglect, accident, unusual physical or electrical stress, unauthorized modifications, tampering, alterations, or service other than by Dtrovision or its authorized agents, causes other than from ordinary use or failure to properly use the Product in the application for which said Product is intended.

FCC/CE Statement

This device complies with part 15 of FCC Rules and EN 55022/55024/61000-3 for CE certification. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must not accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 and 2 of FCC Rules and EN 55022/55024/61000-3 for CE certification. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and. if not installed and used in accordance with the instruction guide, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult a service representative for help.

Properly shielded and grounded cables and connectors must be used in order to comply with FCC/CE emission limits. Changes or modifications not expressly approved by the party responsible for compliance could void the user s authority to operate the equipment.

UL Statement

This device has completed a UL Commercial Inspection and Testing Services for the multimode HDMI cable complied with VW-1 under UL 758. It is validated by the UL file number SV2038 and project number 04CA05353.